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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,225	10/16/2003	Dirk Henf	71100	9469

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MCGLEW & TUTTLE, PC  
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SCARBOROUGH, NY 10510-0827

EXAMINER

FITZGERALD, JOHN P

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/688,225

Applicant(s)

HENF ET AL.

Examiner

John P Fitzgerald

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-12 are rejected under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling. Specifically, the "line section" and the associated "throttling element" or "throttling" which are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The disclosure completely fails to adequately describe the location and function of these two elements, thus failing to enable one skilled in the art to make and use the invention. There is only a brief mention of these recited elements in the SUMMARY OF THE INVENTION section of the instant specification, without reference numerals to the Figures. For the purposes of examination, it appears that the "line section" is the tube (20) element and the "throttling element" is a resultant 'effect' created by the rotation of the "reversing valve," and therefore located within the "reversing valve" and not within the "line section" as recited in claims 1, 6 and 8. Further supporting that the "throttling element" is located or is a created effect within the "reversing valve," claim 3 recites "wherein the variable cross-section area of the throttling element is formed by the degree of overlap between the cross-sectional area of one of the valve inlets with the cross-sectional area of the flow channel." It appears that all of these recited elements/functions are located within the "reversing valve." Thus claim 3 contradicts

claim 1, further adding ambiguity to the claimed invention. A similar argument is made regarding claims 8 , 9 and 10.

3. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 4 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 recites the limitation "said valve element" in line 1. There is insufficient antecedent basis for this limitation in the claim.

#### *Claim Rejections - 35 USC § 103*

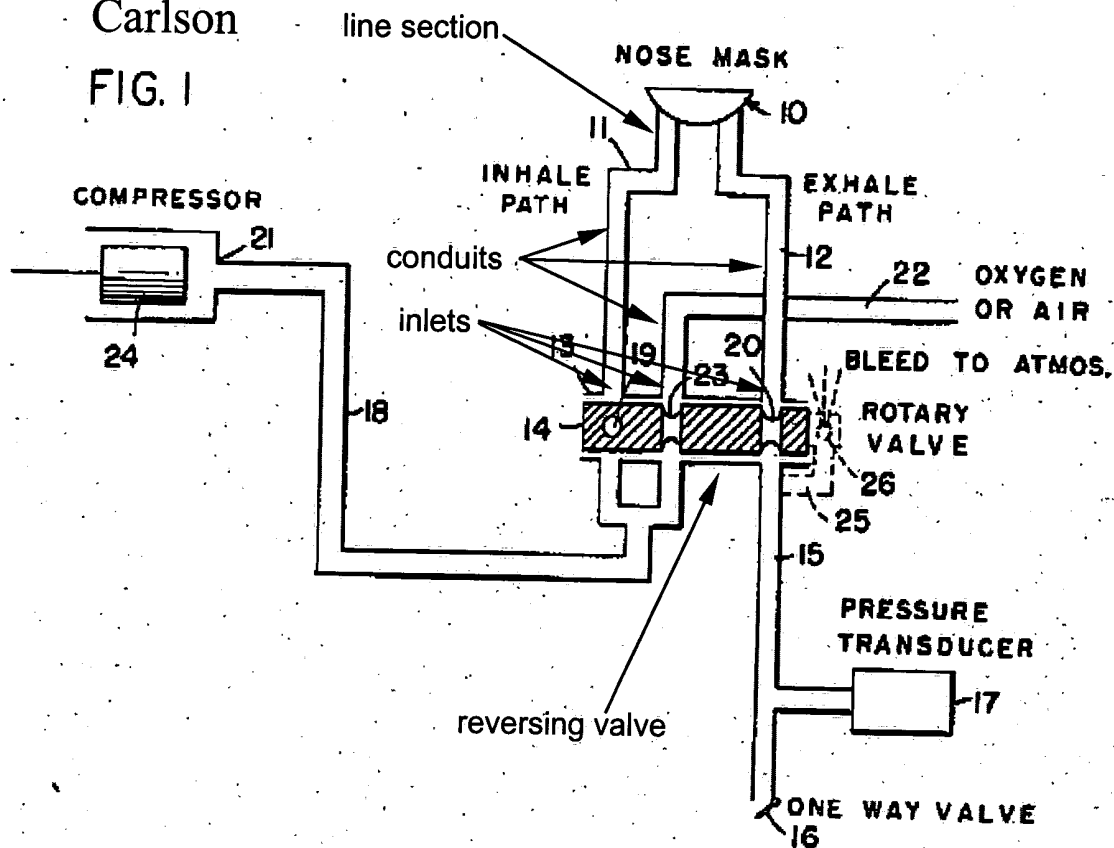
5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. As best understood, claims 1-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 3,357,428 to Carlson. Carlson discloses a device for testing a respirator product (Figs. 1 and 2) having a compressor (note: a compressor, a tank of compressed gas, a pump are all obvious variants of a fan for providing a positive pressure source/gradient capable of inducing flow within associated conduits, and is considered a design choice well within the purview of one of ordinary skill in the art); a suction conduit (11) and a pressure conduit (12) both connected to the compressor; a line section (see Fig. 1) connected to the respirator product;

a reversing valve (13) connecting the compressor to the pressure and suction conduits to control flow to the respirator product via the line section in a predetermined time sequence (via a trigger (28) which energizes clutch motors (32, 37) (as recited in claim 4)) thus variably connecting the pressure conduit and the suction conduit to the open environment (16, 25, 26) in an open position; a throttling element (20, 23) (i.e. 'throttling' of the fluid flow due to change in the cross-sectional area as a rotating valve element (14) of the rotating valve is turned or varied according to a preset manipulated variable (73) (see Fig. 2) connected to the line section between the fan and the respirator product (as recited in claim 1); wherein the reversing valve comprises a valve housing with a valve element (14) swinging in a rotatingly movable manner therein between two end positions, having two valve inlets connected to the suction and pressure conduits and a valve inlets and outlets creating ventilation and flow channels (as recited in claim 2); wherein the preset manipulated variable has a signal curve alternately rising or declining proportionally (Carlson: col. 5, lines 31-43). Specifically regarding claim 3, the variable cross-sectional area that gives rise to the "throttling element/effect" is an inherent property/function of the "reversing valve," as the cross-sectional area overlap to varying degrees as the angle of rotation of the valve element (14) within the valve housing.

Carlson  
FIG. 1



7. As best understood, claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 3,357,428 to Carlson. Carlson discloses a process for testing a respirator product (Figs. 1 and 2), providing a compressor (note: a compressor, a tank of compressed gas, a pump are all obvious variants of a fan for providing a positive pressure source/gradient capable of inducing flow within associated conduits, and is considered a design choice well within the purview of one of ordinary skill in the art) with a suction conduit (11) and a pressure conduit (12) both connected to the compressor; a line section (see Fig. 1) connected to the respirator product via a reversing valve (13) providing flow connection between the compressor to the pressure and suction conduits to control flow to the respirator product via the line section in a predetermined time sequence (via a trigger (28) which energizes clutch motors (32, 37) thus

variably connecting the pressure conduit and the suction conduit to the open environment (16, 25, 26) in an open position; variably throttling the cross-sectional area via throttle elements (20, 23) (i.e. 'throttling' of the fluid flow due to change in the cross-sectional area as a rotating valve element (14) of the rotating valve is turned or varied according to a preset manipulated variable (73) (see Fig. 2) thus controlling the flow of gas to the respirator product corresponding to a preset breathing pattern (as recited in claim 6); wherein the preset manipulated variable has a signal curve alternately rising or declining proportionally (Carlson: col. 5, lines 31-43).

Specifically regarding claim 7, Carlson does not specifically disclose an approximately sinusoidal pressure curve being selected as the breathing pattern, however Carlson does specifically disclose a rate controllable oscillator (73) that emits pulses to control the breathing pattern. It would have been an obvious matter of design choice to employ a sinusoidal signal, since applicant has not disclosed that a sinusoidal signal solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any suitable alternating signal (i.e. square, triangular, saw-tooth, etc.) to control the breathing pattern.

8. As best understood, claims 8-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 3,357,428 to Carlson. Carlson discloses a respirator product testing system (Figs. 1 and 2) having a compressor (note: a compressor, a tank of compressed gas, a pump are all obvious variants of a fan for providing a positive pressure source/gradient capable of inducing flow within associated conduits, and is considered a design choice well within the purview of one of ordinary skill in the art); a suction conduit (11) and a pressure conduit (12) both connected to the compressor; a line section (see Fig. 1) connected to the respirator product; fluid control means via a reversing valve (13) connecting the compressor to the pressure and

suction conduits thus controlling flow to the respirator product via the line section in a predetermined time sequence (via a trigger (28) which energizes clutch motors (32, 37) (as recited in claim 11)) thus variably connecting the pressure conduit and the suction conduit to the open environment (16, 25, 26) in an open position; a throttling element (20, 23) (i.e. 'throttling' of the fluid flow due to change in the cross-sectional area as a rotating valve element (14) of the rotating valve is turned or varied according to a preset manipulated variable (73) (see Fig. 2) and a control unit (as recited in claim 11) connected to the line section between the fan and the respirator product (as recited in claim 8); wherein the reversing valve comprises a valve housing with a valve element (14) swinging in a rotatingly movable manner therein between two end positions, having two valve inlets connected to the suction and pressure conduits and a valve inlets and outlets creating ventilation and flow channels (as recited in claim 9); wherein the preset manipulated variable has a signal curve alternately rising or declining proportionally (Carlson: col. 5, lines 31-43) (as recited in claim 12).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jafari et al., Wickham, Lundberg et al., Colla et al., Brewer et al., Richardson et al., Maryyankek et al., Krager et al., Crutchfield, Beasley, Ulmann, Thompson, Silverman et al., Bennett and FR 724,174 to L'Etat all teach various aspects and elements of the claimed invention.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The



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examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/18/2004

  
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